



PUNTOS DE CONTROL VERTICAL (BM)

PUNTO	COORDENADAS TOPOGRAFICAS		COTA NIVELACION
	ESTE	NORTE	
BM-0	813708.119	9188066.740	2278.886
BM-1	814140.690	9187726.096	2298.700
BM-2	814998.819	9187493.262	2318.354
BM-3	814899.280	9187097.243	2338.182
BM-4	815134.157	9186767.352	2369.349
BM-5	815600.576	9186443.413	2409.949
BM-6	815757.326	9186096.562	2446.228
BM-7	815995.510	9185854.296	2487.014
BM-8	816211.938	9185604.352	2493.332
BM-9	816356.461	9185363.151	2516.509
BM-10	816531.687	9185146.271	2537.996
BM-11	816666.646	9184963.954	2561.049
BM-12	817090.670	9184202.380	2592.546
BM-13	817095.522	9184740.200	2610.393
BM-14	816869.879	9184244.364	2600.221
BM-15	816999.738	9183814.566	2619.781
BM-16	817296.064	9183326.576	2656.176
BM-17	817351.417	9182847.872	2670.733
BM-18/PB-03	817629.350	9182320.290	2672.705
BM-19	817656.686	9181856.238	2666.188
BM-20	817400.773	9181435.121	2649.673
BM-21	817359.691	9180982.729	2674.100
BM-22	817536.636	9180432.332	2647.500
BM-23	818003.107	9180274.721	2614.852
BM-24	818032.652	9179965.712	2679.887
BM-25	817881.202	9179883.167	2645.720
BM-26	817935.589	9179362.360	2622.016
BM-27/AZ-04	817856.219	9178889.576	2490.686

PUNTOS DE CONTROL HORIZONTAL

VERTICE	LADO	DISTANCIA	AZIMUT	NORTE	ESTE	COTA
PB-01	PB-01 - AZ-01	490.2668	31° 4' 10"	8187871.4120	8193737.3390	2318.4837
AZ-01	AZ-01 - P-1	367.6106	187° 56' 52"	8188291.3452	8193990.3961	2328.3476
P-1	P-1 - P-2	64.2336	128° 47' 2"	8187907.6570	8193936.7733	2289.8464
P-2	P-2 - P-3	343.4617	121° 58' 16"	8187876.8449	8193880.7981	2290.2336
P-3	P-3 - P-4	80.9606	148° 47' 14"	8187893.8951	814272.1331	2303.3687
P-4	P-4 - P-5	207.7776	128° 23' 21"	8187824.7620	814314.0526	2306.6937
P-5	P-5 - P-6	247.7603	109° 45' 44"	8187492.8894	814474.6640	2314.6822
P-6	P-6 - P-7	82.3867	141° 4' 52"	8187409.1289	814707.8317	2322.8886
P-7	P-7 - P-8	110.8437	123° 2' 56"	8187345.0268	814769.5893	2326.8010
P-8	P-8 - P-9	244.8187	198° 17' 2"	8187284.6783	814882.4978	2330.8810
P-9	P-9 - P-10	310.2699	138° 17' 7"	8187057.3208	814943.0083	2337.1776
P-10	P-10 - P-11	18.9831	198° 29' 38"	8186822.1540	815145.3980	2348.5016
P-11	P-11 - P-12	99.0633	244° 17' 21"	8186803.9529	815139.9964	2349.6982
P-12	P-12 - P-13	18.6143	188° 3' 43"	8186760.9764	815060.7408	2356.9606
P-13	P-13 - P-14	161.4613	164° 38' 50"	8186741.5580	815047.5900	2368.2036
P-14	P-14 - P-15	430.4418	128° 28' 48"	8186685.8844	815117.2065	2373.4895
P-15	P-15 - P-16	187.4566	138° 13' 17"	8186327.8884	815454.1679	2402.7235
P-16	P-16 - P-17	168.8665	122° 49' 20"	8186192.5092	815683.8627	2423.8345
P-17	P-17 - P-18	63.2873	163° 40' 1"	8186106.3487	815717.4424	2437.2995
P-18	P-18 - P-19	229.8086	28° 38' 56"	8186045.6154	815735.2388	2442.4135
P-19	P-19 - P-20	181.5147	190° 31' 9"	8185247.4728	815845.2523	2456.0610
P-20	P-20 - P-21	357.3451	148° 47' 41"	8185065.9656	815843.6472	2458.5895
P-21	P-21 - P-22	201.7662	14° 59' 18"	8185767.0526	816039.2674	2479.7977
P-22	P-22 - P-23	94.5271	141° 20' 51"	8185692.0138	816091.2425	2487.6462
P-23	P-23 - P-24	87.3776	170° 28' 13"	8185888.1827	816150.2633	2500.2782
P-24	P-24 - AZ-02	180.6258	100° 14' 44"	8185802.0168	816184.7242	2504.4237
AZ-02	AZ-02 - P-25	481.7367	118° 24' 36"	8185769.8882	816342.4696	2523.6877
P-25	P-25 - P-26	121.8317	66° 58' 32"	8185640.6878	816766.1692	2549.0192
P-26	P-26 - P-27	35.8967	144° 37' 2"	8185590.2895	816877.4689	2553.0880
P-27	P-27 - PB-02	126.6234	228° 3' 48"	8185561.1896	816898.1549	2564.1115
PB-02	PB-02 - P-28	88.1196	188° 17' 47"	8185473.3271	816806.9510	2569.9795
P-28	P-28 - P-29	112.8719	134° 46' 43"	8185389.8677	816782.7980	2574.5440
P-29	P-29 - P-30	412.7271	136° 13' 57"	8185311.1646	816862.9058	2580.1365
P-30	P-30 - P-31	146.7849	169° 0' 35"	8185019.1398	817163.5505	2599.9750
P-31	P-31 - P-32	69.5568	223° 28' 2"	8184874.0469	817181.5435	2597.7980
P-32	P-32 - P-33	48.0961	156° 10' 28"	8184823.5232	817133.7366	2596.3075
P-33	P-33 - P-34	236.8744	217° 16' 22"	8184782.2702	817151.9832	2605.3950
P-34	P-34 - P-35	73.8221	218° 56' 51"	8184693.7342	817008.5528	2608.5607
P-35	P-35 - P-36	78.8617	197° 30' 40"	8184556.3078	816982.1641	2607.4287
P-36	P-36 - P-37	344.6919	193° 51' 8"	8184458.1228	816961.8653	2606.8887
P-37	P-37 - P-38	148.1423	168° 49' 0"	8184123.4582	816989.3279	2599.1305
P-38	P-38 - P-39	106.0390	169° 37' 59"	8183978.8601	816905.8711	2600.8677
P-39	P-39 - P-40	64.2000	169° 43' 27"	8183877.6780	816843.4709	2607.7662
P-40	P-40 - P-41	289.3738	163° 34' 11"	8183814.4067	816954.9233	2611.7087
P-41	P-41 - AZ-03	673.7973	164° 40' 36"	8183566.1734	817083.2803	2628.1470
AZ-03	AZ-03 - P-43	356.8169	168° 39' 42"	8183002.7746	817234.9150	2687.6877
P-43	P-43 - P-44	174.6496	141° 32' 30"	8182670.3244	817364.7863	2674.9146
P-44	P-44 - P-45	313.4443	190° 8' 6"	8182553.5629	817473.4584	2671.8482
P-45	P-45 - P-46	1444.5393	192° 37' 38"	8182220.1195	817472.6700	2668.4040
P-46	P-46 - P-47	286.4864	161° 34' 54"	8180777.0980	817406.4466	2677.6027
P-47	P-47 - P-48	941.4503	168° 16' 57"	8180495.7480	817499.8026	2657.1099
P-48	P-48 - P-49	197.7113	168° 16' 54"	8179622.1190	817648.1699	2633.2224
P-49	P-49 - P-50	773.4400	171° 6' 20"	8178447.7324	817817.6211	2636.7627
P-50	P-50 - PB-04	487.9184	177° 6' 52"	8178883.5926	818037.2021	2473.0622

LEYENDA

- POLIGONAL DE APOYO
- EJE PROYECTADO
- CARRETERA EXISTENTE
- PUNTOS DE CONTROL HORIZONTAL (AZ)
- PUNTOS DE CONTROL HORIZONTAL (PB)
- PUNTOS DE POLIGONAL (P)
- PUNTOS DE CONTROL VERTICAL (BM)

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 Proceso y Ploteo: M.CHAFLOQUE

REVISIONES

N°	FECHA	DESCRIPCION

ESTUDIO DEFINITIVO PARA EL MEJORAMIENTO DE LA CARRETERA: SAN MARCOS-CAJABAMBA-SAUSACOCCHA
 TRAMO: SAN MARCOS-CAJABAMBA
 CONTRATO N° 008-2011-MTC/20

PLANO DE GEOREFERENCIACION COORDENADAS TOPOGRAFICAS

FECHA: MAYO 2012
 ESCALA FORMATO A1: 1/15 000
 ESCALA FORMATO A3: 30 000
008-11-PGT-01